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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/216,004	12/17/1998	WING C. CHAU	81862.P106	1360

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EXAMINER

BOAKYE, ALEXANDER O

ART UNIT PAPER NUMBER

2667

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/216,004	Applicant(s) CHAU ET AL.	
	Examiner ALEXANDER BOAKYE	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5, 7-11, 13-15, 17-23, 25-34, 36-38 and 40-51 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11, 9-11, 17-23, 25-34 and 40-51 is/are allowed.
- 6) ☒ Claim(s) 2-5, 13-15 and 36-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3, 4, 5, 13-15 and 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Notenboom et al. (US Patent # 5,748,468) in view of McDonald et al. (US Patent # 4,178,479).

Regarding claim 1, Notenboom teaches a system, comprising: a digital signal processing (DSP) resource manager configured to ensure DSP availability for each of a number of channels as individual ones of the channels are activated (column 10, lines 45-51; see Fig. 6A). Notenboom differs from the claimed invention in that Notenboom does not disclose that the various numbers of the channels are grouped together in a carrier system. However, McDonald discloses that various numbers of the channels are grouped together in a carrier system (column 6, lines 9-25). One of ordinary skill in the art would have been motivated to incorporate channels grouped together in a carrier system into the communication network of Notenboom in order to utilize a plurality of multi time slot digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate various

numbers of channels grouped together in a carrier system such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides system performance.

Regarding claims 3 and 4, Notenboom discloses a digital signal processing (DSP) resource manager (column 3, lines 22-25). Notenboom does not explicitly teach T1 lines. However, McDonald discloses T1 lines (column 5, lines 9-10). One of ordinary skill in the art would have been motivated to incorporate T1 lines into the communication network in order to utilize digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate T1 lines such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides performance.

Regarding claim 5, Notenboom teaches a digital signal processing (DSP) resource manager (column 3, lines 22-25). Notenboom does not disclose channels comprise of voice channels. However, McDonald discloses that channels comprise voice channels (column 3, lines 63-67). One of ordinary skill in the art would have been motivated to incorporate voice channels into the communication network of Notenboom in order to process voice application. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate voice channels such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides channel sharing.

Regarding claim 13, Notenboom teaches a method, comprising: managing a digital signal processing (DSP) system to ensure DSP availability for each of a number

of channels as individual ones of the channels are activated (column 10, lines 45-51; see Fig. 6A). Notenboom differs from the claimed invention in that Notenboom does not disclose grouping various number of the channels together in a carrier system. However, McDonald discloses grouping various number of the channels together in a carrier system (column 6, lines 9-25). One of ordinary skill in the art would have been motivated to incorporate grouping various number of the channels together in a carrier system into the communication network of Notenboom in order to utilize a plurality of multi time slot digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate grouping various number of the channels together in a carrier system such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides system performance.

Regarding claims 14, and 15, Notenboom discloses a digital signal processing (DSP) resource manager (column 3, lines 22-25). Notenboom does not explicitly teach T1 lines. However, McDonald discloses T1 lines (column 5, lines 9-10). One of ordinary skill in the art would have been motivated to incorporate T1 lines into the communication network in order to utilize digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate T1 lines such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides performance.

Regarding claim 36, Notenboom teaches an apparatus comprising: means for managing a digital signal processing (DSP) system to ensure DSP availability for each

of a number of channels as individual ones of the channels are activated (column 10, lines 45-51; see Fig. 6A). Notenboom differs from the claimed invention in that Notenboom does not disclose means for grouping various number of channels together in a carrier system. However, McDonald discloses means for grouping various number of channels together in a carrier system (column 6, lines 9-25). One of ordinary skill in the art would have been motivated to incorporate channels grouped together in a carrier system into the communication network of Notenboom in order to utilize a plurality of multi time slot digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate various numbers of channels grouped together in a carrier system such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides system performance.

Regarding claims 37 and 38, Notenboom discloses a digital signal processing (DSP) resource manager (column 3, lines 22-25). Notenboom does not explicitly teach T1 lines. However, McDonald discloses T1 lines (column 5, lines 9-10). One of ordinary skill in the art would have been motivated to incorporate T1 lines into the communication network in order to utilize digital data buses. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate T1 lines such as the one taught by McDonald into the communication network of Notenboom with the motivation being that it provides performance.

Allowable Subject Matter

2. Claims 7, 8, 45-47, 9-11, 17-21, 48-51, 22, 23, 25-34, and 40-44 allowable

The following is a statement of reasons for the indication of allowable subject matter:

As to claims 7, 8 and 45-47, the prior art of record does not teach wherein the DSP resources are assigned to DSP groups according to information compression requests associated with the activated channels. As to claims 9-11, the prior art of record does not teach wherein the DSP resource manager is configured to ensure DSP availability for each of the channels by assigning a sufficient number of DSP resources to each of a number of DSP groups to process information transmitted within all activated channels.

As to claims 17-21 and 48-51, the prior art of record does not teach wherein allocation of the DSP resources to DSP groups is performed by a DSP resource manager according to information compression requests associated with the activated channels. As to claims 22, 23, 25-34, the prior art of record does not teach a DSP resource manager configured to allocate the DSP resources among DSP resource groups according to the requirements of a plurality of channels utilizing the DSP resources, allocating sufficient DSP resources to one of the DSP resource groups to process all of the plurality of channels. As to claims 40-44, the prior art of record does not teach wherein allocation of the DSP resources to DSP groups is performed by a DSP resource manager according to information compression requests associated with the activated channels.

Response to Arguments

3. Applicant's arguments with respect to claim 2-5, 7-11, 13-15, 17-23, 25-34, 36-38, and 40-51 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alexander Boakye whose telephone number is (571) 272-3183. The examiner can normally be reached on M-F from 8:30am to 6:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham, can be reached on (571) 272-3179. The fax number is (703) 872-9306. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Electronic Business Center numbers 866-217-9197 and 703-305-3028.

Alexander Boakye

Patent Examiner.

AB

06/25/05


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 6/27/05